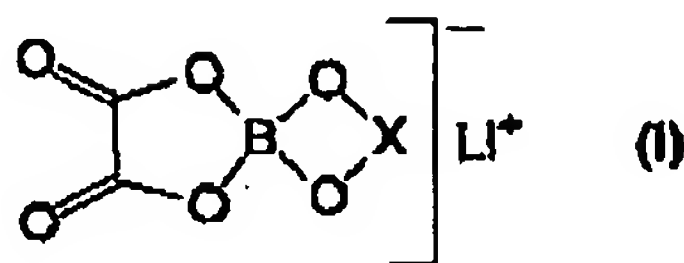


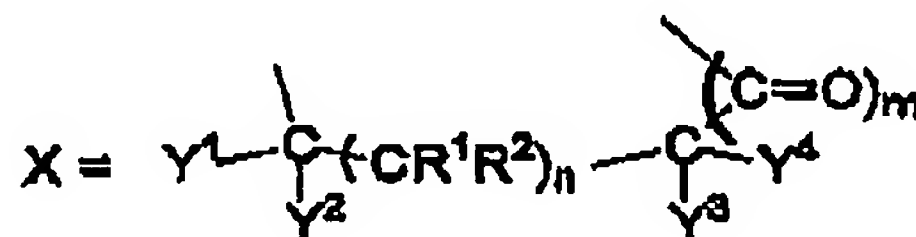
Claims

1. A conducting salt containing lithium bis(oxalato)borate (LiBOB) and mixed lithium-borate salts of the type



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wherein the proportion of compound (I) in the conducting salt amounts to 0.01 mol.% to 20 mol.% and X in formula (I) is a bridge which is linked to the boron by two oxygen atoms and which is selected from



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wherein

- Y¹ and Y² together signify O, m = 1, n = 0, and Y³ and Y⁴ are, independently of one another, H or an alkyl residue with 1 to 5 C atoms, or
- 15 - Y¹, Y², Y³, Y⁴ are in each case, independently of one another, OR (with R = alkyl residue with 1 to 5 C atoms), or H or an alkyl residue with 1 to 5 C atoms, and where m = 0 or 1, n = 0 or 1, or
- Y² and Y³ are members of a 5-membered or 6-membered aromatic or heteroaromatic ring (with N, O or S as heteroelement), which may be optionally substituted with alkyl, alkoxy, carboxy or nitrile, in which case Y¹ and Y⁴ are not applicable and n = 0, m = 0 or 1.
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- 2. A conducting salt according to Claim 1, characterised in that compound part X is formed from 1,3-
- 25 dicarboxylic acids formally lessened by two OH groups.

3. A conducting salt according to Claim 2, characterised in that the 1,3-dicarboxylic acid is malonic acid or an alkylmalonic acid.
4. A conducting salt according to Claim 1, characterised in that compound part X is formed from 1,2- or 1,3-hydroxycarboxylic acids formally lessened by two OH groups.
5. A conducting salt according to Claim 4, characterised in that the 1,2-hydroxycarboxylic acid or 1,3-hydroxycarboxylic acid is glycolic acid or lactic acid.
6. A conducting salt according to Claim 1, characterised in that compound part X is formed by saturated C₂ chains or saturated C₃ chains..
7. A conducting salt according to Claim 1, characterised in that compound part X is formed from 1,2-bisphenols or from 1,2-carboxyphenols (such as salicylic acid) or from aromatic 1,2-dicarboxylic acids (such as phthalic acid) or pyridine-2,3-diol, these compounds having been formally lessened by two OH groups.
8. A conducting salt according to Claim 7, characterised in that the 1,2-bisphenol is pyrocatechol, the 1,2-carboxyphenol is salicylic acid, and the 1,2-dicarboxylic acid is phthalic acid.
9. A process for producing conducting salts according to one or more of Claims 1 to 8, characterised in that a suitable boron compound, oxalic acid, a suitable chelating agent L₂ and a suitable lithium compound are mixed, the molar ratio of the substances employed (boron compound / mixture of oxalic acid and chelating agent L² / lithium compound) being 1 : 2 : 1, and the mixture of oxalic acid and chelating agent L² containing a maximum of 20 mol.% chelating agent L².

10. Process according to Claim 9, characterised in that boric acid is employed as boron compound, and a dicarboxylic acid (not oxalic acid) or hydroxycarboxylic acid is employed as chelating agent L².
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11. Process according to Claim 9, characterised in that 1,3-dicarboxylic acids, for example malonic acid or an alkylmalonic acid, in which case an alkyl group with 1 to 5 C atoms is preferably employed, 1,2- or 1,3-hydroxycarboxylic acids, for example glycolic acid or lactic acid, 1,2- or 1,3-diols, 1,2-bisphenols, for example pyrocatechol, 1,2-carboxyphenols, for example salicylic acid (which may also be maximally disubstituted) or aromatic or heteroaromatic 1,2-dicarboxylic acids, for example phthalic acid or pyridine-2,3-diol, is employed as chelating agent L².
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12. Process according to one of Claims 9 to 11, characterised in that the raw-material components are suspended in a medium suitable for azeotropic removal of water (e.g. toluene, xylene, methylcyclohexane, perfluorinated hydrocarbons with more than 6 C atoms), and the water is removed azeotropically in known manner.
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13. Process according to one of Claims 9 to 11, characterised in that it is implemented in aqueous solution, the components being charged into water in arbitrary sequence and being concentrated by evaporation subject to stirring, preferably at reduced pressure.
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14. Process according to Claim 13, characterised in that alcohols or other polar organic solvents are used instead of water as reaction media.
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15. Process according to one of Claims 9 to 11, characterised in that the raw-material components are mixed without addition of a solvent, are heated by
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supply of heat, and are dehydrated under preferably reduced pressure.

16. Use of the conducting salts according to one or more of Claims 1 to 8 in galvanic cells.
- 5 17. Use of the conducting salts according to one or more of Claims 1 to 8 in lithium-ion batteries.